

TABLE OF CONTENTS

Title Page	
SUMMARY	S-1
S.1 Scope and Uses of This EIR	S-1
S.1.1 Scope of This EIR	S-1
S.1.2 Uses of This EIR	S-2
S.2 Projects Considered	S-3
S.3 Summary of Significant Effects and Mitigation Measures	S-4
S.3.1 Physical Environment	S-4
S.3.2 Biological Environment	S-11
S.3.3 Human Environment	S-14
S.4 Other CEQA Considerations	S-17
S.4.1 Areas of Environmental Controversy	S-17
S.4.2 Effects Found Not to be Environmentally Significant	S-19
S.4.3 Summary of Effects Reduced to a Level of Insignificance	S-20
S.4.4 Significant Effects that Cannot Be Avoided	S-21
S.4.5 Irreversible Changes	S-21
S.4.6 Summary of Cumulative Effects	S-21
S.4.7 Growth Inducement	S-22
S.4.8 Environmentally Superior Alternative	S-22
 CHAPTER 1.0 INTRODUCTION	 1-1
1.1 The EIR Process Under CEQA	1-1
1.1.1 The Identification of Significant Issues	1-1
1.1.2 The EIR Process for Lead Agencies Under CEQA	1-1
1.2 Uses of This EIR	1-3
1.2.1 Current Application Reviews	1-3
1.2.2 Relationship to Future Phases of Project Implementation	1-4
1.3 Contents of This Document	1-5
 CHAPTER 2.0 PROJECTS CONSIDERED IN THIS ASSESSMENT	 2-1
2.1 Authority for Carrying Out the Management Plan	2-1
2.1.1 Department of Fish & Game	2-1
2.1.2 State Lands at Lake Earl	2-2
2.2 Project Objectives	2-2
2.2.1 Purpose of LEWA Acquisition	2-3
2.2.2 Purpose of the LEWA Management Plan	2-3
2.3 Location	2-4
2.4 Alternatives Evaluated	2-4
2.4.1 Mechanical Breaching Process Summary	2-5
2.4.2 No Project	2-6
2.4.3 Preferred Alternative	2-7
2.4.4 Low Level Breaching Alternative	2-14
2.4.5 Natural Breaching Alternative	2-14
2.4.6 Summary Comparison of Alternatives	2-15

CHAPTER 3.0	PHYSICAL ENVIRONMENT	3-1
3.1	Hydrology	3-1
3.1.1	Environmental Setting	3-1
3.1.2	Thresholds of Significance	3-6
3.1.3	Project Effects	3-8
3.1.4	Mitigation and Monitoring	3-11
3.2	Water Quality	3-11
3.2.1	Environmental Setting	3-11
3.2.2	Thresholds of Significance	3-16
3.2.3	Project Effects	3-17
3.2.4	Mitigation and Monitoring	3-21
CHAPTER 4.0	BIOLOGICAL ENVIRONMENT	4-1
4.1	Sensitive Species	4-1
4.1.1	Environmental Setting	4-1
4.1.2	Thresholds of Significance	4-13
4.1.3	General Comparison of Alternative Effects for Sensitive Species	4-13
4.1.4	Implementation Effects	4-21
4.1.5	Mitigation and Monitoring	4-28
4.2	Waterbirds	4-29
4.2.1	Environmental Setting	4-29
4.2.2	Thresholds of Significance	4-31
4.2.3	General Comparison of Alternative Effects for Waterbirds	4-32
4.2.4	Project Effects	4-35
4.2.5	Mitigation and Monitoring	4-40
4.3	Wetlands	4-40
4.3.1	Wetlands in the Lake Earl Wildlife Area	4-40
4.3.2	Thresholds of Significance	4-44
4.3.3	General Comparison of Alternatives for Wetlands	4-45
4.3.4	Project Effects	4-52
4.3.5	Mitigation and Monitoring	4-54
CHAPTER 5.0	HUMAN ENVIRONMENT	5-1
5.1	Planning and Land Use	5-1
5.1.1	Environmental Setting	5-1
5.1.2	Thresholds of Significance	5-12
5.1.3	Project Effects	5-13
5.1.4	Mitigation and Monitoring	5-22
5.2	Transportation	5-23
5.2.1	Environmental Setting	5-23
5.2.2	Thresholds of Significance	5-24
5.2.3	Project Effects	5-24
5.2.4	Mitigation and Monitoring	5-29
5.3	Public Health and Safety Effects	5-30
5.3.1	Setting and Issues to be Addressed	5-31

5.3.2	Thresholds of Significance	5-32
5.3.3	Project Effects by Type	5-33
5.3.4	Project Effects by Alternative	5-38
5.3.5	Mitigation and Monitoring	5-41
5.4	Cultural Resources	5-42
5.4.1	Environmental Setting	5-42
5.4.2	Thresholds of Significance	5-45
5.4.3	Project Effects	5-45
5.4.4	Mitigation and Monitoring	5-47
CHAPTER 6.0	ADDITIONAL CEQA CONSIDERATIONS	6-1
6.1	Areas of Environmental Controversy	6-1
6.2	Effects Found Not to be Environmentally Significant	6-2
6.3	Summary of Effects Reduced to a Level of Insignificance	6-3
6.4	Significant Effects that Cannot Be Avoided	6-4
6.5	Irreversible Changes	6-4
6.6	Summary of Cumulative Effects	6-4
6.7	Growth Inducement	6-5
6.8	Environmentally Superior Alternative	6-5
CHAPTER 7.0	LIST OF PREPARERS	7-1
7.1	Department of Fish & Game Personnel	7-1
7.2	Lake Earl Wildlife Area Personnel	7-1
7.3	Consultants	7-1
CHAPTER 8.0	REFERENCES	8-1
8.1	Published Documents	8-1
8.2	Other Written Communications	8-3
8.3	Persons Consulted	8-5
APPENDICES		
A	Notice of Preparation	
B	Hydrological Analysis	
C	Permitted Breaches	
D	Cultural Resources Letters	

LIST OF TABLES

Table S-1	Summary of Potentially Significant Environmental Effects for the Preferred Alternative, Mitigation Measures, and Significance after Mitigation	S-6
Table 2-1	Comparison of Alternatives Addressed in this EIR	2-17
Table 3-1	Surface Area and Stored Volume Estimates for Management Plan Alternatives, Lake Earl Wildlife Area	3-3
Table 3-2	Best Management Practices (BMPs) Potentially Useful for the Lake Earl Wildlife Area Management Plan's Implementation	3-23
Table 4-1	Fish Species Occurring in the Project Area Listed Under Federal or California Endangered Species Acts	4-3
Table 4-2	Fish Species of "Special Concern" in the Lake Earl Wildlife Area	4-4
Table 4-3	Terrestrial Wildlife Species Occurring in the Project Area Listed Under Federal or State Endangered Species Acts	4-7
Table 4-4	Terrestrial Wildlife Species of "Special Concern" in the Lake Earl Wildlife Area	4-8
Table 4-5	Sensitive Plant Species	4-13
Table 4-6	Surface Area, Stored Volume, and Stream Length Estimates for Various Water Surface Elevations, Lake Earl Wildlife Area	4-16
Table 4-7	Summary of Wetland Functions	4-42
Table 4-8	Identified Beneficial Uses for Lake Earl/Tolowa	4-44
Table 4-9	Calculated Wetland Acreages Resulting from the Considered Alternatives	4-46
Table 5-1	Potential Effects on Land Use Under the Preferred Alternative	5-15
Table 5-2	Potential Effects on Land Use Under the Low Level Breaching Alternative	5-19
Table 5-3	Potential Effects on Land Use Under the Natural Breaching Alternative	5-20
Table 5-4	Potentially Affected Road Lengths Under the Preferred Alternative	5-26

Table 5-5	Potentially Affected Road Lengths Under the Low Level Breaching Alternative	5-27
Table 5-6	Potentially Affected Road Lengths Under the Natural Breaching Alternative	5-28
Table 5-7	Potential Effects on Wells and Septic Systems Under the Natural Breaching Alternative	5-40

LIST OF FIGURES

(Note: All figures appear as unnumbered pages following the text pages cited below.)

Figure S-1	Project Location	following page S-1
Figure S-2	Lake Earl Wildlife Area Location Map	following page S-1
Figure 2-1	Lake Earl Wildlife Area Project Alternatives	following page 2-4
Figure 4-1	Potential Oregon Silverspot Butterfly Habitat In and Adjacent to the Lake Earl Wildlife Area	following page 4-21
Figure 4-2	Major Wetland Types Present at Current Managed Water Surface Elevation (8' – 10')	following page 4-40
Figure 5-1	Existing Land Use In and Adjacent to the Lake Earl Wildlife Area	following page 5-2
Figure 5-2	Land Use - Crescent City/Lake Earl Area, Planning Area No. 3, Del Norte County Local Coastal Plan, 1984	following page 5-5